NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau
1190 South St. Francis Drive (87505)
P.O. Box 5469, Santa Fe, New Mexico 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.env.nm.gov

GROUND WATER QUALITY BUREAU
DISCHARGE PERMIT – NEW
Issued under 20.6.2 NMAC

TEMPO AI#:	**2515**
GWQB Discharge Permit No:	**DP-1895**
Facility Name:	**Former McCatharn Dairy**
Facility Owner/Operator:	**Suertudo Development, LLC**
Mailing Address:	P.O. Box 19306 Albuquerque, NM 87119-0306
Permitting Action:	**New**
Source Classification:	**Agriculture - Crop**
Facility Location:	6363 Desert Road, Albuquerque, NM Section 19, Township 09N, Range 03E
County:	Bernalillo
Agriculture Compliance Contact	**Sarah Schnell**
Phone No.	**(505) 222-9520**

EFFECTIVE DATE: DATE **TERM ENDS:** EXP DATE

_____

Michelle Hunter
Chief, Ground Water Quality Bureau

[Subsection H of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.I]

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit, **DP-1895**, to Suertudo Development, LLC (permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from Former McCatharn Dairy (facility) into ground and surface water, so as to protect ground and surface water for present and potential future use as domestic and agricultural water supply and other uses and protect public health. In issuing this Discharge Permit, NMED has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been or will be met. Pursuant to Section 20.6.2.3104 NMAC, it is the responsibility of the permittee to comply with the terms and conditions of this Discharge Permit; failure may result in an enforcement action(s) by NMED (20.6.2.1220 NMAC).

The activities that produce the discharge, the location of the discharge, and the quantity, quality and flow characteristics of the discharge are briefly described as follows.

Up to 16,560 gallons per day (gpd) of groundwater under remediation is pumped from groundwater monitoring and remediation wells and discharged by sprinkler irrigation to up to five acres for treatment by phytoremediation. Data collected from on-site monitoring wells document groundwater contamination attributed to one or more wastewater system components at this former dairy facility: Groundwater quality standards for total dissolved solids, chloride, and nitrate (N-NO_3) have been exceeded according to the criteria of Sections 20.6.2.3101 and 20.6.2.3103 NMAC.

The discharge contains water contaminants that may be elevated above the standards of Section 20.6.2.3103 NMAC and/or the presence of toxic pollutants as defined in Subsection WW of 20.6.2.7 NMAC. This Discharge Permit contains requirements, actions and/or contingencies intended to control documented groundwater contamination.

The facility is located at 6363 Desert Road, approximately eight miles south of Albuquerque, in Section 19, Township 09N, Range 03E, Bernalillo County. The site address has also previously been identified as 6363 New Mexico State Highway 47. Groundwater most likely to be affected is at a depth of approximately 64 feet and has a total dissolved solids concentration of approximately 462 milligrams per liter.

The application (i.e., discharge plan) consists of the materials submitted by EA Engineering, Science, and Technology, Inc. PBC, on behalf of the permittee dated May 24, 2019 and received June 6, 2019, and materials contained in the administrative record prior to issuance of this Discharge Permit. The discharge shall be managed in accordance with all conditions and requirements of this Discharge Permit.

Pursuant to Section 20.6.2.3109 NMAC, NMED reserves the right to require a Discharge Permit Modification in the event NMED determines that the requirements of 20.6.2 NMAC are being or may be violated or the standards of Section 20.6.2.3103 NMAC are being or may be violated. This may include a determination that structural controls and/or management practices approved under this Discharge Permit are not protective of groundwater quality, and that more stringent requirements to protect groundwater quality may be required by NMED. The permittee may be required to implement abatement of water pollution and remediate groundwater quality.

Issuance of this Discharge Permit does not relieve the permittee of the responsibility to comply with the WQA, 20.6.2 NMAC, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

The following acronyms and abbreviations may be used in this Discharge Permit.

Abbreviation	Explanation		Abbreviation	Explanation
BOD_5	biochemical oxygen demand (5-day)		NMED	New Mexico Environment Department
CFR	Code of Federal Regulations		NMSA	New Mexico Statutes Annotated
CFU	Colony Forming Unit		NO_3-N	nitrate-nitrogen
Cl	Chloride		NTU	nephelometric turbidity units
EPA	United States Environmental Protection Agency		TDS	total dissolved solids
gpd	gallons per day		TKN	total Kjeldahl nitrogen
LAA	land application area		total nitrogen	= TKN + NO_3-N
LADS	land application data sheet(s)		TRC	Total Residual Chlorine
mg/L	milligrams per liter		TSS	total suspended solids
mL	Milliliters		WQA	New Mexico Water Quality Act

Abbreviation	Explanation		Abbreviation	Explanation
MPN	Most Probable Number		WQCC	Water Quality Control Commission
NMAC	New Mexico Administrative Code		WWTF	Wastewater Treatment Facility

PART A II. FINDINGS

In issuing this Discharge Permit, NMED finds the following.

1. The permittee is discharging contaminated groundwater from the facility so that such contaminated groundwater leaching through the soil may directly or indirectly impact groundwater within the meaning of Section 20.6.2.3104 NMAC.

2. The permittee is discharging contaminated groundwater from the facility so that such contaminated groundwater may recirculate into groundwater of the State of New Mexico that has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.

3. The discharge from the facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC.

III. AUTHORIZATION TO DISCHARGE

Pursuant to 20.6.2.3104 NMAC, it is the responsibility of the permittee to ensure that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein.

Up to 16,560 gpd of groundwater under remediation is pumped from capture wells, temporarily stored above-ground in a retention and storage structure, and discharged by sprinkler irrigation to up to five acres for treatment by phytoremediation. [20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

IV. CONDITIONS

NMED issues this Discharge Permit for the discharge of water contaminants subject to the following conditions.

A. OPERATIONAL PLAN

#	Terms and Conditions
1.	The permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 2 and 4 NMAC. [Subsection C of 20.6.2.3109 NMAC]
2.	The permittee shall operate in a manner such that standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC are not violated. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC]

Operational Actions with Implementation Deadlines

#	Terms and Conditions
3.	Prior to discharging from the facility, the permittee shall submit written notification to NMED stating the date the discharge is to commence. [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]
4.	Prior to discharging from the facility, the permittee shall submit an up-to-date diagram of the layout of the entire facility to NMED. The diagram shall include the following elements: • a north arrow; • the effective date of the diagram; • all components of the groundwater remediation system; • all groundwater monitoring wells; • all backflow prevention methods/devices; • all flow measurement devices; • all water retention and storage structures/devices • all land application areas; and • all wastewater sampling locations. Any element that cannot be directly shown due to its location inside of existing structures, or because it is buried without surface identification, shall be on the diagram in a schematic format and identified as such.

#	**Terms and Conditions**
	[Subsection C of 20.6.2.3106 NMAC, Subsection A of 20.6.2.3107 NMAC]
5.	Within 90 days the effective date (by **DATE**), submit the final construction plans or specifications for all components of the groundwater remediation system (e.g., lift stations, valves, transfer lines, mix tanks, process units and associated details) The construction plans and specifications shall bear the seal and signature of a licensed New Mexico professional engineer (pursuant to New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority) [Subsection C of 20.6.2.3106 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]
6.	Prior to discharging, the permittee shall install, and sample proposed downgradient monitoring well **MW-7**. The permittee shall submit a completion report containing construction and lithologic logs, groundwater sampling analytical data, survey data and a groundwater elevation contour map to NMED within 60 days following well completion. The survey conducted to document the installation of **MW-7** shall include a survey documenting the location and elevation of each of the onsite monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7). [Subsection A of 20.6.2.3107 NMAC]
7.	Prior to discharging, the permittee shall install the infrastructure necessary to transfer, distribute, apply, and measure groundwater under remediation. Documentation confirming installation of the distribution system shall consist of a narrative statement including the system type and location, and the method of backflow prevention employed. Documentation shall be submitted to NMED prior to discharging to the land application area. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
8.	Prior to discharging from the facility, the permittee shall post signs indicating that the groundwater discharged at the facility is not potable. Signs shall be posted at the facility entrance and other areas where there is potential for public contact with wastewater. All signs shall be printed in English and Spanish. Signs shall be printed with the following language: NOTICE: NON-POTABLE WATER-DO NOT DRINK. AVISO: AGUA NO POTABLE - NO BEBA

#	Terms and Conditions
	[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]

Operating Conditions

#	Terms and Conditions
9.	The permittee shall apply groundwater under remediation uniformly to cropland under cultivation, such that the amount of total nitrogen in the combined application of wastewater and fertilizer does not exceed by more than 25% the amount reasonably expected to be taken up by the crop(s) and removed by harvesting in any rolling 12-month period. Excessive ponding shall be prevented. Nitrogen content shall not be adjusted to account for volatilization or mineralization processes. [Subsection C of 20.6.2.3109 NMAC]
10.	Any irrigation or supply wells located within the land application area shall have a surface pad constructed in accordance with the recommendations of Subsection G of 19.27.4.29 NMAC and a permanent well cap or cover pursuant to Subsection I of 19.27.4.29 NMAC [Subsection A and C of 20.6.2.3109 NMAC]
11.	The permittee shall maintain signs indicating that the groundwater being land applied at the facility is not potable. Signs shall be posted at the facility entrance and other areas where there is potential for public contact with non-potable groundwater. All signs shall be printed in English and Spanish and shall remain visible and legible for the term of this Discharge Permit. [Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]

B. MONITORING AND REPORTING

#	Terms and Conditions
12.	The permittee shall conduct the following monitoring, reporting, and other requirements listed below in accordance with the monitoring requirements of this Discharge Permit. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

#	Terms and Conditions
13.	METHODOLOGY – Unless otherwise approved in writing by NMED, the permittee shall conduct sampling and analysis in accordance with the most recent edition of the following documents. a) American Public Health Association, *Standard Methods for the Examination of Water and Wastewater* b) U.S. Environmental Protection Agency, *Methods for Chemical Analysis of Water and Waste* c) U.S. Geological Survey, *Techniques for Water Resources Investigations of the U.S. Geological Survey* d) American Society for Testing and Materials, *Annual Book of ASTM Standards, Part 31. Water* e) U.S. Geological Survey, et al., *National Handbook of Recommended Methods for Water Data Acquisition* f) *Federal Register*, latest methods published for monitoring pursuant to Resource Conservation and Recovery Act regulations g) *Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods; Part 2. Microbiological and Biochemical Properties; Part 3. Chemical Methods*, American Society of Agronomy [Subsection B of 20.6.2.3107 NMAC]
14.	The permittee will continue to adhere to all requirements of the May 7, 2019 Settlement Agreement for Abatement, Closure Conditions of Discharge Permit DP-585 (DP-585), Conditional Approval of the Stage 2 Abatement Plan (pending), and any subsequent work plans submitted to and approved by the GWQB. [Subsection A of 20.6.2.3107 NMAC, 20.6.2.4101-4115 NMAC]
15.	The permittee shall submit **semi-annual** monitoring reports to NMED for the most recently completed semi-annual period by 1st of February and August each year. Semi-annual monitoring shall be performed during the following periods and submitted as follows: • January 1st through June 30th (first half) – **due by August 1st; and** • July 1st through December 31st (second half) – **due by February 1st.**

#	**Terms and Conditions**
	Monitoring reports shall be submitted to the Remediation Oversight Section and Agricultural Compliance Section of NMED. [Subsection A of 20.6.2.3107 NMAC]
16.	Submit supply well water analytical data to NMED as part of the semi-annual monitoring reports due February 1 and August 1 of each year. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
17.	Maintain an accurate written record of the volume of fresh water added/blended to the groundwater under remediation to properly calculate the overall volume of groundwater under remediation applied to the LAA and submit as part of the semi-annual monitoring reports due February 1 and August 1 of each year. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
18.	Maintain a log recording for all additional fertilizers applied to each field within the land application area that includes the following: • date of fertilizer application • type and form of fertilizer • fertilizer analysis • amount of fertilizer applied (pounds/acre) to each field • amount of nutrients applied (pounds/acre) to each field Submit a copy of the current log to NMED as part of each semi-annual monitoring report. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
19.	Maintain a record of crop removal and tissue analysis records, and calculate the effective nitrogen removal for each crop. Submit these records annually with the semi-annual monitoring report due August 1 of each year.

Monitoring Actions with Implementation Deadlines

#	Terms and Conditions
20.	Prior to discharging from the facility, the permittee shall confirm the installation of the following flow meters. a) **Meter-1 -** a closed-pipe totalizing flow meter installed on MW-5 to measure the volume of groundwater under remediation removed from MW-5. b) **Meter-2** – a closed-pipe totalizing flow meter installed on the LAA sprinkler system to measure the total amount of water applied to each field in the LAA. Confirmation of meter installation, type, calibration and locations shall be submitted to NMED within 30 days of the effective date of this discharge permit (by **DATE**). [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
21.	**Prior to discharging,** the permittee shall collect an initial composite soil samples from each field within the land application area(s) to establish a baseline. Composite soil samples shall be collected for all fields regardless of whether the field is cropped, remains fallow, or has received groundwater under remediation. One surface composite soil sample (first-foot) and two sub-surface composite soil samples (second-foot and third-foot) shall be collected from each field. Composite soil samples shall be collected and analyzed according to the following procedure. a) Each surface and sub-surface soil sample shall consist of a single composite of five (5) soil cores collected randomly throughout each field. Should a field consist of different soil textures (i.e., sandy and silty clay), a composite soil sample shall be collected from each soil texture within each field. b) Surface soil samples (first-foot) shall be collected from a depth of 0 to 12 inches. c) Each second-foot sub-surface soil sample shall be collected from a depth of 12 to 24 inches. d) Each third-foot sub-surface soil sample shall be collected from a depth of 24 to 36 inches. e) Each surface and sub-surface composite sample shall be analyzed for pH, electrical conductivity, total Kjeldahl nitrogen, nitrate as nitrogen, chloride, organic matter, potassium, phosphorus, sodium, calcium, magnesium, sulfate, soil texture, and sodium adsorption ratio. f) pH, electrical conductivity, sodium, calcium, magnesium, and sulfate shall be analyzed using a saturated paste extract in accordance with the analytical methodology required by Condition 13 of this discharge permit. Phosphorus shall be analyzed using the Olsen sodium bicarbonate method in accordance with the analytical methodology required by Condition 13 of this discharge permit. Nitrate as nitrogen shall be analyzed by a 2 molar KCl extract in accordance with the analytical methodology required by Condition 13 of this discharge permit. Total

#	Terms and Conditions
	Kjeldahl nitrogen, chloride, organic matter, potassium, soil texture, and sodium adsorption ratio shall be analyzed in accordance with the analytical methodology required by Condition 13 of this discharge permit g) The permittee shall submit the analytical results and a map showing the fields and the sampling locations within each field to the department in the semi-annual monitoring report due by August 1 following the effective date of the discharge permit. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

Ground Water Monitoring Conditions

#	Terms and Conditions
22.	The permittee shall perform annual sampling in the following irrigation supply wells and analyze the samples for dissolved TKN, NO_3-N, TDS, and Cl. a) SW-1 b) SW-2 c) any other fresh water supply source providing water for irrigation of the LAA. The permittee shall use this data for the completion of LADS. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the semi-annual monitoring report due August 1. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
23.	The permittee shall perform quarterly sampling of water in the groundwater retention and storage structure and analyze the sample for dissolved TKN, NO_3-N, TDS, and Cl. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the semi-annual monitoring reports due February 1st and August 1st each year. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
24.	The permittee shall perform <u>semi-annual</u> groundwater sampling in the following monitoring wells and analyze the samples for dissolved TKN, NO_3-N, TDS, and Cl.

#	Terms and Conditions
	a) MW-1: hydrologically cross-gradient of the synthetically-lined western lagoon, situated on the southern boundary of the facility. b) MW-2: hydrologically upgradient of contamination sources at the site, situated on the western boundary of the facility. Groundwater sample collection, preservation, transport and analysis shall be performed according to the following procedure. a) Measure the depth-to-most-shallow groundwater from the top of the well casing to the nearest hundredth of a foot. b) Purge three well volumes of water from the well prior to sample collection. c) Obtain samples from the well for analysis. d) Properly prepare, preserve and transport samples. e) Analyze samples in accordance with the methods authorized in this Discharge Permit. Depth-to-most-shallow groundwater measurements, analytical results, including the laboratory QA/QC summary report, and a facility layout map showing the location and number of each well shall be submitted to NMED in the semi-annual monitoring reports due February 1st and August 1st each year. [Subsection A of 20.6.2.3107 NMAC]
25.	The permittee shall perform quarterly groundwater sampling in the following monitoring wells and analyze the samples for dissolved TKN, NO_3-N, TDS, and Cl. a) MW-3: hydrologically downgradient of the synthetically-lined lagoons, situated on the southern boundary of the facility. b) MW-4: hydrologically cross-gradient of the former corral area, situated on the eastern boundary of the facility. c) MW-5: hydrologically downgradient of the synthetically-lined lagoons, situated on the southern boundary of the facility. d) MW-6: hydrologically downgradient of the synthetically-lined lagoons, situated on the southern boundary of the facility. e) MW-7: hydrologically downgradient of the irrigation area. Groundwater sample collection, preservation, transport and analysis shall be performed according to the following procedure. a) Measure the depth-to-most-shallow groundwater from the top of the well casing to the nearest hundredth of a foot. b) Purge three well volumes of water from the well prior to sample collection. c) Obtain samples from the well for analysis. d) Properly prepare, preserve and transport samples.

#	Terms and Conditions
	e) Analyze samples in accordance with the methods authorized in this Discharge Permit. Depth-to-most-shallow groundwater measurements, analytical results, including the laboratory QA/QC summary report, and a facility layout map showing the location and number of each well shall be submitted to NMED in the semi-annual monitoring reports due February 1st and August 1st each year. [Subsection A of 20.6.2.3107 NMAC]
26.	The permittee shall develop a groundwater elevation contour map on a quarterly basis using the top of casing elevation data from the monitoring well survey and quarterly depth-to-most-shallow groundwater measurements, referenced to mean sea level, obtained from each groundwater monitoring wells required by this Discharge Permit. The groundwater elevation contour map shall depict the groundwater flow direction based on the groundwater elevation contours. Groundwater elevations between monitoring well locations shall be estimated using common interpolation methods. A contour interval appropriate to the data shall be used, but in no case shall the interval be greater than two feet. Groundwater elevation contour maps shall depict the groundwater flow direction, using arrows, based on the orientation of the groundwater elevation contours, and the location and identification of each monitoring well and contaminant source. The quarterly groundwater elevation contour maps shall be submitted to NMED in the semi-annual monitoring reports due February 1st and August 1st. [Subsection A of 20.6.2.3107 NMAC]
27.	NMED shall have the option to perform downhole inspections of all monitoring wells identified in this Discharge Permit. NMED shall establish the inspection date and provide at least a 60-day notice to the permittee by certified mail. The permittee shall have any existing dedicated pumps removed at least 48 hours prior to NMED inspection to allow adequate settling time of sediment agitated from pump removal. Should a facility not have existing dedicated pumps, but decide to install pumps in any of the monitoring wells, NMED shall be notified at least 90 days prior to pump installation so that a downhole well inspection(s) can be scheduled prior to pump placement. [Subsections A and D of 20.6.2.3107 NMAC]

Facility Monitoring Conditions

#	**Terms and Conditions**
28.	The permittee shall measure the monthly volume(s) discharged from MW-5 and any other monitoring well used for irrigation and remediation, to the retention/storage structure using a totalizing flow meter(s). The meter(s) shall be located on the transfer line from the extraction well(s) to the retention/storage structure. The permittee shall maintain a log that records the date that discharges occur from MW-5 and any other monitoring well to the to the retention/storage structure, monthly totalizing meter readings and units of measurement. The log shall be used to calculate the total monthly volume of groundwater under remediation discharged from the facility. A copy of the log shall be submitted to NMED in the monitoring reports due by February 1 and August 1 each year. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
29.	The permittee shall measure the monthly volume(s) used for irrigation and remediation to the to the LAA. The meter(s) shall be located on the transfer line from the retention/storage structure to the sprinkler system for land application. The combined monthly volumes shall be used to represent the total monthly volume of water discharged to the land application area under phytoremediation. The permittee shall maintain a log that records the date that water is applied for irrigation and remediation, monthly totalizing meter readings, and units of measurement. The log shall be used to calculate the total monthly volume of fresh water used for irrigation, in combination with groundwater under remediation discharged from the facility to the land application area under phytoremediation. The monthly volume discharged to each location shall be used on the LADS to calculate nitrogen loading. A copy of the log shall be submitted to NMED in the monitoring reports due by February 1 and August 1 each year. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
30.	The permittee shall collect quarterly samples collected from the **retention/storage structure**, and analyze the samples for: • TKN; • NO3-N; • TDS; and • Cl

#	Terms and Conditions
	Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the semi-annual monitoring reports. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
31.	All flow meters shall be capable of having their accuracy verified under actual working (field) conditions. A field verification method shall be developed for each flow meter and that method shall be used to check the accuracy of each respective meter. Field calibrations shall be performed upon repair or replacement of a flow measurement device and, every other year thereafter. Flow meters shall be calibrated to within plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual knowledgeable in flow measurement and in the installation/operation of the particular device in use. A flow meter calibration report shall be prepared for each flow measurement device at the frequency calibration is required. The flow meter calibration report shall include the following information. a) The location and meter identification. b) The method of flow meter field calibration employed. c) The measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration check. d) The measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter. e) Any flow meter repairs made during the previous year or during field calibration. The permittee shall maintain records of flow meter calibration(s) at a location accessible for review by NMED during facility inspections. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
32.	The permittee shall visually inspect flow meters on a monthly basis for evidence of malfunction. If a visual inspection indicates a flow meter is not functioning as required by this Discharge Permit, the permittee shall repair or replace the meter within 30 days of discovery. For *repaired* meters, the permittee shall submit a report to NMED with the next monitoring report following the repair that includes a description of the malfunction; a statement verifying the repair; and a flow meter field calibration report completed in

#	Terms and Conditions
	accordance with the requirements of this Discharge Permit. For *replacement* meters, the permittee shall submit a report to NMED with the next monitoring report following the replacement that includes a design schematic for the device and a flow meter field calibration report completed in accordance with the requirements of this Discharge Permit. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
33.	The permittee shall visually inspect backflow prevention devices or methods (such as total disconnect/air gap) on a monthly basis for evidence of malfunction. If a visual inspection indicates a backflow prevention device/method is not functioning as required by this Discharge Permit, the permittee shall notify NMED, and repair or replace the device within 30 days of discovery. Copies of the inspection and maintenance records associated with the backflow prevention program shall be maintained at a location available for inspection by NMED. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
34.	Beginning in the year following the initial soil sampling of this discharge permit, the permittee shall collect annual soil samples from each field within the land application area(s) that has received or is actively receiving groundwater under remediation. For those fields that have never before received groundwater under remediation, the permittee shall collect soil samples immediately before initial wastewater application and annually thereafter. Once a field has received groundwater under remediation it shall be sampled annually regardless of whether the field is cropped, remains fallow, or has recently received groundwater under remediation. One surface composite soil sample (first-foot) and two sub-surface composite soil samples (second-foot and third-foot) shall be collected from each field. Composite soil samples shall be collected and analyzed according to the following procedure. h) Each surface and sub-surface soil sample shall consist of a single composite of five (5) soil cores collected randomly throughout each field. Should a field consist of different soil textures (i.e., sandy and silty clay), a composite soil sample shall be collected from each soil texture within each field. i) Surface soil samples (first-foot) shall be collected from a depth of 0 to 12 inches. j) Each second-foot sub-surface soil sample shall be collected from a depth of 12 to 24 inches. k) Each third-foot sub-surface soil sample shall be collected from a depth of 24 to 36 inches. l) Each surface and sub-surface composite sample shall be analyzed for pH, electrical conductivity, total Kjeldahl nitrogen, nitrate as nitrogen, chloride, organic matter,

#	Terms and Conditions
	potassium, phosphorus, sodium, calcium, magnesium, sulfate, soil texture, and sodium adsorption ratio. m) pH, electrical conductivity, sodium, calcium, magnesium, and sulfate shall be analyzed using a saturated paste extract in accordance with the analytical methodology required by Condition 13 of this discharge permit. Phosphorus shall be analyzed using the Olsen sodium bicarbonate method in accordance with the analytical methodology required by Condition 13 of this discharge permit. Nitrate as nitrogen shall be analyzed by a 2 molar KCl extract in accordance with the analytical methodology required by Condition 13 of this discharge permit. Total Kjeldahl nitrogen, chloride, organic matter, potassium, soil texture, and sodium adsorption ratio shall be analyzed in accordance with the analytical methodology required by Condition 13 of this discharge permit n) The permittee shall submit the analytical results and a map showing the fields and the sampling locations within each field to the department in the semi-annual monitoring report due by August 1 following the effective date of the discharge permit. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
35.	The permittee shall complete LADS (copy enclosed) on a semi-annual basis that document the amount of nitrogen applied to land application area under phytoremediation during the most recent 12 months. The LADS shall reflect the total nitrogen concentration from the most recent analyses of fresh irrigation water, and water from the corresponding monitoring well(s) used for irrigation and remediation, and the measured discharge volumes to the land application area for each month. The LADS shall be completed with the information above or shall include a statement that the discharge of groundwater under remediation did not occur. The LADS shall be submitted to NMED as part of the semi-annual monitoring report due February 1 and August 1. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
36.	Collect and analyze a composite sample of plant material representative of each type of crop harvested from the land application area over the course of the year. Report results to NMED as part of the semi-annual monitoring report due August 1. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
37.	Submit crop yield documentation and plant and harvest dates of each crop grown to NMED as part of the semi-annual monitoring report due August 1.

#	Terms and Conditions
	[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
38.	Submit a nitrogen removal summary report to NMED as part of the semi-annual monitoring report due August 1. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

C. CONTINGENCY PLAN

#	Terms and Conditions
39.	In the event that information available to NMED indicates that a well(s) is not constructed in a manner consistent with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011; contains insufficient water to effectively monitor groundwater quality; or is not completed in a manner that is protective of groundwater quality, the permittee shall install a replacement well(s) within 120 days following notification from NMED. The permittee shall survey the replacement monitoring well(s) within 150 days following notification from NMED. Replacement well location(s) shall be approved by NMED prior to installation and completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. The permittee shall submit construction and lithologic logs, survey data and a groundwater elevation contour map to NMED within 60 days following well completion. Upon completion of the replacement monitoring well(s), the monitoring well(s) requiring replacement shall be properly plugged and abandoned. Well plugging, abandonment and documentation of the abandonment procedures shall be completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011, and all applicable local, state, and federal regulations. The well abandonment documentation shall be submitted to NMED within 60 days of completion of well plugging activities. [Subsection A of 20.6.2.3107 NMAC]

#	Terms and Conditions
40.	In the event that groundwater flow information obtained pursuant to this Discharge Permit indicates that a monitoring well(s) is not located hydrologically downgradient of the discharge location(s) it is intended to monitor, the permittee shall install a replacement well(s) within 120 days following notification from NMED. The permittee shall survey the replacement monitoring well(s) within 150 days following notification from NMED. Replacement well location(s) shall be approved by NMED prior to installation and completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. The permittee shall submit construction and lithologic logs, survey data and a groundwater elevation contour map within 30 days following well completion. [Subsection A of 20.6.2.3107 NMAC]
41.	In the event that information available to NMED indicates that phytoremediation of groundwater is not remediating groundwater, the permittee shall propose an alternative groundwater remediation method(s) by submitting a Stage 2 Abatement Plan Modification to NMED for approval. The plan shall include a schedule for implementation and shall be submitted within 90 days of notification from NMED that phytoremediation of groundwater is not remediating groundwater. The permittee shall initiate implementation of the plan following approval by NMED. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC, 20.6.2.4101-4115 NMAC]
42.	In the event that the LADS show that the amount of nitrogen in groundwater under remediation and additional fertilizer applied in any 12-month period exceeds by more than 25% the amount reasonably expected to be taken up by the crop(s) and removed by harvesting, the permittee shall propose the reduction of nitrogen loading to the remediation area by submitting a Stage 2 Abatement Plan Modification to NMED for approval. The plan shall include a schedule for implementation and shall be submitted within 90 days following the end of the monitoring period in which the exceedance occurred. The permittee shall initiate implementation of the plan following approval by NMED. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC, 20.6.2.4101-4115 NMAC]
43.	In the event that a release (commonly known as a "spill") occurs that is not authorized under this Discharge Permit, the permittee shall take measures to mitigate damage from

#	Terms and Conditions
	the unauthorized discharge and initiate the notifications and corrective actions required in Section 20.6.2.1203 NMAC and summarized below. Within 24 hours following discovery of the unauthorized discharge, the permittee shall verbally notify NMED and provide the following information. a) The name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility. b) The name and address of the facility. c) The date, time, location, and duration of the unauthorized discharge. d) The source and cause of unauthorized discharge. e) A description of the unauthorized discharge, including its estimated chemical composition. f) The estimated volume of the unauthorized discharge. g) Any actions taken to mitigate immediate damage from the unauthorized discharge. Within one week following discovery of the unauthorized discharge, the permittee shall submit written notification to NMED with the information listed above and any pertinent updates. Within 15 days following discovery of the unauthorized discharge, the permittee shall submit a corrective action report/plan to NMED describing any corrective actions taken and/or to be taken relative to the unauthorized discharge that includes the following information. a) A description of proposed actions to mitigate damage from the unauthorized discharge. b) A description of proposed actions to prevent future unauthorized discharges of this nature. c) A schedule for completion of proposed actions. In the event that the unauthorized discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements of Section 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after notice is required to be given pursuant to Paragraph (1) of Subsection A of 20.6.2.1203 NMAC, the permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC.

#	Terms and Conditions
	Nothing in this condition shall be construed as relieving the permittee of the obligation to comply with all requirements of Section 20.6.2.1203 NMAC. [20.6.2.1203 NMAC]
44.	In the event that NMED or the permittee identifies any failures of the discharge plan or this Discharge Permit not specifically noted herein, NMED may require the permittee to submit a corrective action plan and a schedule for completion of corrective actions to address the failure(s). Additionally, NMED may require a Discharge Permit modification to achieve compliance with 20.6.2 NMAC. [Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]

D. CLOSURE PLAN

Closure Actions with Implementation Deadlines

45.	Within 180 days following the effective date of this Discharge Permit (**by DATE**), the permittee shall submit a future use proposal (i.e. inspection and repair for use as an irrigation retention and storage structure) for the eastern synthetically-lined lagoon; or resume closure of this structure in compliance with the May 7, 2019 Settlement Agreement for Abatement and the closure conditions of DP-595. [Subsection A of 20.6.2.3107 NMAC]

Permanent Facility Closure Conditions

#	Terms and Conditions
46.	In the event a facility, or a component of a facility, is proposed to be permanently closed, the permittee shall perform the following measures. The permittee shall continue to remediate groundwater until the concentrations of nitrate, chloride, and TDS measured at the onsite downgradient wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, and any potential future downgradient wells) have not exceeded

#	Terms and Conditions
	the standards of 20.6.2.3103 NMAC for a minimum of eight (8) consecutive quarterly groundwater sampling events. If monitoring results show that a groundwater quality standard in Section 20.6.2.3103 NMAC is exceeded or a toxic pollutant as defined in Section of 20.6.2.7 NMAC is present in groundwater, the permittee shall implement the contingency plan required by this Discharge Permit. Following notification from NMED that remediation of groundwater may cease, the permittee shall plug and abandon the monitoring well(s) in accordance with the attachment titled Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions, Revision 1.1, March 2011. When all remediation requirements have been met, the permittee may submit a written request for termination of the Discharge Permit to NMED. [Subsection A of 20.6.2.3107 NMAC, Subsection D of 20.6.2.4103 NMAC, 40 CFR Part 503]

E. GENERAL TERMS AND CONDITIONS

#	Terms and Conditions
47.	RECORD KEEPING - The permittee shall maintain a written record of: • information and data used to complete the application for this Discharge Permit; • any releases (commonly known as "spills") not authorized under this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC; • the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater; • facility record drawings (plans and specifications) showing the actual construction of the facility and bear the seal and signature of a licensed New Mexico professional engineer; • copies of monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit; • the volume of wastewater or other wastes discharged pursuant to this Discharge Permit;

#	**Terms and Conditions**
	• groundwater quality and wastewater quality data collected pursuant to this Discharge Permit; • copies of construction records (well log) for all groundwater monitoring wells required to be sampled pursuant to this Discharge Permit; • the maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit; and • data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit, including: o the dates, location and times of sampling or field measurements; o the name and job title of the individuals who performed each sample collection or field measurement; o the sample analysis date of each sample o the name and address of the laboratory, and the name of the signatory authority for the laboratory analysis; o the analytical technique or method used to analyze each sample or collect each field measurement; o the results of each analysis or field measurement, including raw data; o the results of any split, spiked, duplicate or repeat sample; and o a copy of the laboratory analysis chain-of-custody as well as a description of the quality assurance and quality control procedures used. The written record shall be maintained by the permittee at a location accessible during a facility inspection by NMED for a period of at least five years from the date of application, report, collection or measurement and shall be made available to the department upon request. [Subsections A and D of 20.6.2.3107 NMAC]
48.	INSPECTION and ENTRY – The permittee shall allow inspection by NMED of the facility and its operations that are subject to this Discharge Permit and the WQCC regulations. NMED may upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC. The permittee shall allow NMED to have access to and reproduce for their use any copy of the records, and to perform assessments, sampling or monitoring during an inspection

#	**Terms and Conditions**
	for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations. Nothing in this Discharge Permit shall be construed as limiting in any way the inspection and entry authority of NMED under the WQA, the WQCC Regulations, or any other local, state or federal regulations. [Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]
49.	DUTY to PROVIDE INFORMATION - The permittee shall, upon NMED's request, allow for NMED's inspection/duplication of records required by this Discharge Permit and/or furnish to NMED copies of such records. [Subsection D of 20.6.2.3107 NMAC]
50.	MODIFICATIONS and/or AMENDMENTS – In the event the permittee proposes a change to the facility or the facility's discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated or discharged by the facility, the permittee shall notify NMED prior to implementing such changes. The permittee shall obtain approval (which may require modification of this Discharge Permit) by NMED prior to implementing such changes. [Subsection C of 20.6.2.3107 NMAC, Subsections E and G of 20.6.2.3109 NMAC]
51.	PLANS and SPECIFICATIONS – In the event the permittee is proposing to construct a wastewater system or change a process unit of an existing system such that the quantity or quality of the discharge will change substantially from that authorized by this Discharge Permit, the permittee shall submit construction plans and specifications to NMED for the proposed system or process unit prior to the commencement of construction. In the event the permittee implements changes to the wastewater system authorized by this Discharge Permit that result in only a minor effect on the character of the discharge, the permittee shall report such changes (including the submission of record drawings, where applicable) as of January 1 and June 30 of each year to NMED. [Subsections A and C of 20.6.2.1202 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]

#	**Terms and Conditions**
52.	CIVIL PENALTIES - Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or facilities, or any refusal or failure to provide NMED with records or information, may subject the permittee to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to WQA 74-6-10(C) and 74-6-10.1, civil penalties of up to $15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the WQCC Regulations, or this Discharge Permit, and civil penalties of up to $10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit. [20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10 and 74-6-10.1]
53.	CRIMINAL PENALTIES – No person shall: • make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained under the WQA; • falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or • fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation. Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this condition and thereby causes a substantial adverse environmental impact is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-

#	**Terms and Conditions**
	15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other person is guilty of a second degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. [20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]
54.	COMPLIANCE with OTHER LAWS - Nothing in this Discharge Permit shall be construed in any way as relieving the permittee of the obligation to comply with any other applicable federal, state, and/or local laws, regulations, zoning requirements, nuisance ordinances, permits or orders. [NMSA 1978, § 74-6-5.L]
55.	RIGHT to APPEAL - The permittee may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC within thirty days of the receipt of postal notice of this Discharge Permit and shall include a statement of the issues to be raised and the relief sought. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review. [20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]
56.	TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this facility or any portion thereof, the permittee shall: • notify the proposed transferee in writing of the existence of this Discharge Permit; • include a copy of this Discharge Permit with the notice; and • deliver or send by certified mail to NMED a copy of the notification and proof that such notification has been received by the proposed transferee. Until both ownership and possession of the facility have been transferred to the transferee, the permittee shall continue to be responsible for any discharge from the facility. [20.6.2.3111 NMAC]
57.	PERMIT FEES - Payment of permit fees is due at the time of Discharge Permit approval. Permit fees shall be paid in a single payment or shall be paid in equal installments on a yearly basis over the term of the Discharge Permit. Single payments shall be remitted to

#	**Terms and Conditions**
	NMED no later than 30 days after the Discharge Permit effective date. Initial installment payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date; subsequent installment payments shall be remitted to NMED no later than the anniversary of the Discharge Permit effective date. Permit fees are associated with issuance of this Discharge Permit. Nothing in this Discharge Permit shall be construed as relieving the permittee of the obligation to pay all permit fees assessed by NMED. A permittee that ceases discharging or does not commence discharging from the facility during the term of the Discharge Permit shall pay all permit fees assessed by NMED. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date. [Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]